2. A method as in claim 1, wherein said tunable damping element includes a rod which is connected to said resonating element, and wherein said increasing includes tightening said tunable damping element, to increase an amount of tension in said resonating element.

3. A method as in claim 1, wherein said resonating element includes a cabinet with facing surfaces, and said rod extends between said facing surfaces to tension said alternating surfaces relative to one another.

4. A method as in claim 1, wherein said resonating element includes an automobile.

5. A method as in claim 1, wherein said resonating element includes a speaker enclosure.

6. A method as in claim 2, wherein said tightening comprises providing a washer on the rod, and tightening the washer against a surface of the resonating element.

7. A method as in claim 6, further comprising coupling a sound damping material to said washer.

A 1 Cont'd

8. A method as in claim 7, wherein said increasing comprises tuning the resonating element to a frequency related to characteristics of the sound damping material.

9. A method as in claim 8, wherein said characteristics include a maximum frequency of maximum sound absorption of the sound damping material.

10. A method comprising:

forming an audio enclosure which produces audio frequencies at a specified frequency; and

tuning a resonant frequency to increase a resonant frequency of the enclosure to a level outside of a bandwidth of the audio frequencies.

11. A method as in claim 10, wherein said resonant frequency tuning comprises using a variable tension device to increase a tension of said audio enclosure.

12. A method as in claim 11 wherein said variable tension device comprises a rod with threads, which is selectively tightened to increase a tension.

13. A method as in claim 12, further comprising attaching a sound damping material to the enclosure, and wherein said tuning comprises tuning the enclosure to an optimum frequency of said sound damping material.

14. (Amended) A device comprising:

a mechanical structure having opposing surfaces; and

a resonant frequency tuning element coupled between said opposing surfaces and selectively tunable to change a resonant frequency of said mechanical structure.

15. A device as in claim 14, wherein said resonant frequency tuning element is coupled in a way to increase said resonant frequency of said mechanical structure.

16. A device as in claim 14, wherein said resonant frequency tuning element includes a threaded rod with screw threads thereon, and at least one nut which is tightened to increase a tension between said opposing surfaces of said mechanical structure.

17. A device as in claim 16, wherein said resonant frequency tuning element further includes at least one washer, which is pressed against said surfaces of said mechanical structure.

18. A device as in claim 14, further comprising a sound damping material, coupled to said resonant frequency tuning element.

19. A device as in claim 18, wherein said sound damping material is a constrained layer damping material.

20. A method comprising:

providing a sound damping material on mechanical structure, having opposing surfaces, coupled to at least one of said opposing surfaces, and operating to damp at least part of an effect of sound on said mechanical structure; and

tuning a resonant frequency of said material structure, to a value which is within an optimum range for said sound damping material.

21. A method as in claim 20, wherein said sound damping material is a constrained layer damping material.

a1 cont'd

a' cont'd

22. A method as in claim 20, wherein said tuning comprises increasing a tension between said opposing surfaces to increase a resonant frequency of said structure.